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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/652,726	08/29/2003	Mike Suk	HSJ920030101US1 (HITG.038)	9715
51298	7590	07/13/2005	EXAMINER	
CRAWFORD MAUNU PLLC 1270 NORTHLAND DRIVE SUITE 390 ST. PAUL, MN 55120			NEGRON, DANIEL L	
			ART UNIT	PAPER NUMBER
			2651	

DATE MAILED: 07/13/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

10/652,726

Applicant(s)

SUK, MIKE

Examiner

Daniell L. Negrón

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 17 March 2005.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-26 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-4, 6-12, 14-20 and 22-27 is/are rejected.
- 7) ☒ Claim(s) 5, 13 and 21 is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 29 August 2003 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
 - ☐ Certified copies of the priority documents have been received in Application No. _____.
 - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date _____
- 4) ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: _____

DETAILED ACTION

Claim Rejections - 35 USC § 103

1. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

2. Claims 1, 6, 7, 9, 14, 15, 17, and 22-27, are rejected under 35 U.S.C. 103(a) as being unpatentable over Forehand U.S. Patent No. 6,760,174 in view of Kamijima U.S. Patent Application Publication No. 2003/0099054.

Regarding claims 1, 6, 7, 9, 14, 15, 17, and 22-27, the rejections applied to claims 1, 6-9, 14-17, and 22-27 in the previous Office action mailed December 14, 2004 are herein repeated for the same reasons (see Response to Arguments).

3. Claims 2-4, 8, 10-12, 16, and 18-21 are rejected under 35 U.S.C. 103(a) as being unpatentable over Forehand U.S. Patent No. 6,760,174 as modified by Kamijima U.S. Patent Application Publication No. 2003/0099054 and further in view of Tokuyama et al U.S. Patent No. 6,594,104.

Regarding claims 2-4, 8, 10-12, 16, and 18-21, the rejections applied to claims 2-4, 8, 10-12, 16, and 18-21 in the previous Office action mailed December 14, 2004 are herein repeated for the same reasons (see Response to Arguments).

Allowable Subject Matter

4. Claims 5, 13, and 21 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

Response to Arguments

5. Applicant's arguments filed March 17, 2005 have been fully considered but they are not persuasive.

Regarding claims 1, 6, 7, 9, 14, 15, 17, and 22-27, the Examiner recognizes that obviousness can only be established by combining or modifying the teachings of the prior art to produce the claimed invention where there is some teaching, suggestion, or motivation to do so found either in the references themselves or in the knowledge generally available to one of ordinary skill in the art. See *In re Fine*, 837 F.2d 1071, 5 USPQ2d 1596 (Fed. Cir. 1988) and *In re Jones*, 958 F.2d 347, 21 USPQ2d 1941 (Fed. Cir. 1992). In this case, Applicant argues that Forehand U.S. Patent No. 6,760,174 fails to show writing reference data or anything related to writing reference data. However, the Examiner respectfully disagrees since Forehand discloses a storage device (100) which writes data (column 4, lines 13-18) on a medium (108) and uses the data as a reference when a read error occurs by re-reading the data in while controlling the increasing the protrusion of the head (118) until the data is successfully read (column 6, lines 54-58). Furthermore, Forehand shows a desire to improve positioning in high density mediums (column 1, lines 60-65) but fails to disclose increasing the protrusion through the use of a heating element and adjusting the level of heating on the heating element to increase protrusion and attempting to write or read data at different drive temperatures, Kamijima U.S. Patent

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No. 2003/0099054 is introduced to show precisely controlling a head fly height by controlling the heating value of a heater (page 1, paragraph 11, lines 7-9), and to provide motivation for one with ordinary skill to combine Forehand and Kamijima to produce the claimed invention.

Applicant further argues that Kamijima fails to suggest that determining whether a read is successful and adjusting the level of heating until the read is successful. The Examiner respectfully disagrees since Kamijima discloses that by precisely adjusting the fly height through controlling the heat in a transducer head (page 1, paragraph 11, lines 7-9), a decrease in writing ability or reading ability can be compensated for (page 1, paragraph 11, lines 15-21). Therefore it is considered that one with ordinary skill in the art at the time the invention was made would be motivated to combine the fly height control method disclosed by Forehand with precise control of the head through use of a heating element as taught by Kamijima in order to precisely control the fly height of the head during write and read operations and to improve the signal capability of the head in a high density, small magnetic spacing environment. For these reasons it is considered that the references meet the limitations of the current application as claimed.

Regarding claims 2-4, 8, 10-12, 16, and 18-21, claims remain rejected under 35 U.S.C. 103(a) for the same reasons discussed in the previous Office action since claims depend from the claims discussed above.

Conclusion

6. **THIS ACTION IS MADE FINAL.** Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire **THREE MONTHS** from the mailing date of this action. In the event a first reply is filed within **TWO**

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MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the mailing date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Daniell L. Negrón whose telephone number is 571-272-7559. The examiner can normally be reached on Monday-Friday (8:30-6:00) alternate Fridays off.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, David R. Hudspeth can be reached on 571-272-7843. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

DLN 
June 28, 2005


DAVID HUDSPETH
SUPERVISORY PATENT EXAMINER
TECHNOLOGY CENTER 2600